

Amendments to the Claims

The following listing of claims replaces all prior versions of the claims and all prior listings of the claims in the present application.

Claims 1-58 (canceled)

Claim 59 (new): A method of manufacturing a tyre for a vehicle wheel, comprising:
making at least one carcass ply by deposition of elongated sections circumferentially distributed on a toroidal support; and
applying annular reinforcing structures to a region close to inner-circumferential edges of the at least one carcass ply;
wherein each of the elongated sections extends in a U-shaped configuration around a cross-sectional outline of the toroidal support to define two side portions and one crown portion,
wherein the side portions are mutually spaced apart in an axial direction of the toroidal support,
wherein the crown portion extends at a radially-outer position between the side portions,
and
wherein each elongated section is laid down substantially in a plane parallelly offset relative to a meridian plane of the toroidal support.

Claim 60 (new): The method of claim 59, wherein the elongated sections are laid down at a circumferential pitch corresponding to a multiple of a width of the elongated sections, and

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wherein each of the elongated sections is a strip structure comprising longitudinal and parallel thread elements at least partly covered with at least one layer of elastomer material.

Claim 61 (new): The method of claim 59, wherein each elongated section is laid down in a plane parallel to the meridian plane of the toroidal support,

wherein each elongated section passes through transition regions between a respective crown portion and respective side portions,

wherein each crown portion substantially lies in a reference plane radial to a geometric axis of the toroidal support, and

wherein each side portion extends in an inclined direction relative to a respective reference plane.

Claim 62 (new): The method of claim 59, wherein deposition of the elongated sections comprises:

laying down a first series of elongated sections circumferentially distributed on the toroidal support; and

laying down a second series of elongated sections circumferentially distributed on the toroidal support.

Claim 63 (new): The method of claim 62, wherein the elongated sections of the first and second series are laid down in deposition planes offset on opposite sides relative to the meridian plane of the toroidal support, and

wherein the side portions of the elongated sections of the first and second series have respectively crossed orientations.

Claim 64 (new): The method of claim 62, wherein the elongated sections of the first series are laid down at a circumferential pitch that is at least twice a width of the elongated sections of the first series, and

wherein the elongated sections of the second series are laid down in spaces existing between the elongated sections of the first series to define the at least one carcass ply together with the elongated sections of the first series.

Claim 65 (new): The method of claim 62, wherein the elongated sections of the first series are laid down at a circumferential pitch corresponding to a multiple of a width of the elongated sections of the first series,

wherein the elongated sections of the second series are laid down at a circumferential pitch corresponding to a multiple of a width of the elongated sections of the second series, and

wherein each of the elongated sections of the first and second series is a strip structure comprising longitudinal and parallel thread elements at least partly covered with at least one layer of elastomer material.

Claim 66 (new): The method of claim 59, wherein the crown portions of each elongated section are arranged consecutively in side-by-side relationship along a circumferential extension of the toroidal support, and

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wherein the side portions of each elongated section are each partly covered by or cover a side portion of at least one circumferentially-adjacent elongated section.

Claim 67 (new): The method of claim 62, wherein at least one first primary portion of each annular reinforcing structure is applied against side portions of the elongated sections of the first series before deposition of the elongated sections of the second series, and

wherein the elongated sections of the second series are laid down with respective side portions overlapping the at least one first primary portion on axially-opposite sides relative to the side portions of the elongated sections of the first series.

Claim 68 (new): The method of claim 67, further comprising, after deposition of the elongated sections of the second series:

laying down a third series of elongated sections circumferentially distributed on the toroidal support;

applying second primary portions of each annular reinforcing structure against side portions of the elongated sections of the third series at axially-opposite positions relative to the at least one first primary portion of each annular reinforcing structure; and

laying down a fourth series of elongated sections circumferentially distributed on the toroidal support;

wherein respective side portions of the elongated sections of the fourth series overlap the second primary portions on axially-opposite sides relative to the side portions of the elongated sections of the third series.

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Claim 69 (new): The method of claim 68, wherein the elongated sections of the first series are laid down at a circumferential pitch corresponding to a multiple of a width of the elongated sections of the first series,

wherein the elongated sections of the second series are laid down between two consecutive elongated sections of the first series,

wherein the elongated sections of the third series are laid down at a circumferential pitch corresponding to a multiple of a width of the elongated sections of the third series,

wherein the elongated sections of the fourth series are laid down between two consecutive elongated sections of the third series,

wherein the elongated sections of the first and second series define a first carcass ply, and

wherein the elongated sections of the third and fourth series define a second carcass ply superposed on the first carcass ply.

Claim 70 (new): The method of claim 68, wherein the elongated sections of the first and second series are laid down in first deposition planes,

wherein the elongated sections of the third and fourth series are laid down in second deposition planes,

wherein the first and second deposition planes are offset on respectively opposite sides relative to the meridian plane of the toroidal support, and

wherein the side portions of the elongated sections of the first and second series have a crossed orientation relative to the side portions of the elongated sections of the third and fourth series.

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Claim 71 (new): The method of claim 68, further comprising:
applying additional portions of the annular reinforcing structures to regions close to the inner-circumferential edges of the at least one carcass ply;
wherein the at least one carcass ply is partly interposed between the second primary portions and the additional portions of respective annular reinforcing structures.

Claim 72 (new): The method of claim 59, wherein production of at least one primary portion of each annular reinforcing structure comprises:
laying down at least one elongated element in concentric coils to form a circumferentially-inextensible annular insert substantially in a form of a crown;
forming at least one filling body of elastomer material; and
joining the at least one filling body to the annular insert.

Claim 73 (new): The method of claim 72, wherein the at least one elongated element is laid down directly against the side portions of elongated sections previously deposited on the toroidal support to form the annular insert directly in contact with the elongated sections, and wherein the at least one filling body is then formed by laying down a continuous strip of elastomer material directly against the annular insert.

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